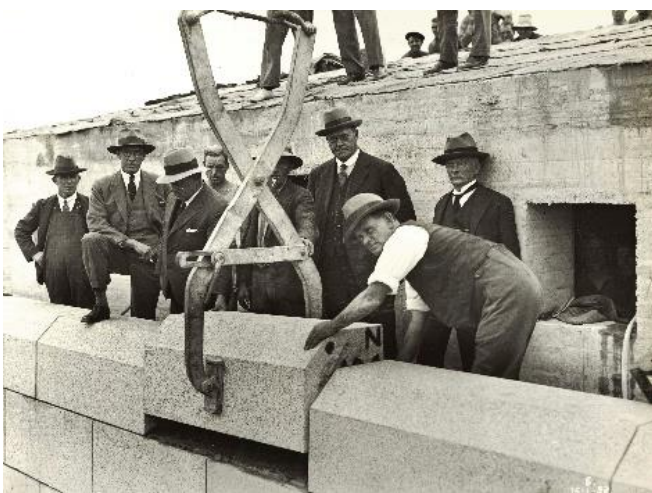


A NOMINATION FOR THE RECOGNITION OF  
**MORUYA GRANITE QUARRY COMPLEX & GRANITE TOWN**  
AS SIGNIFICANT ENGINEERING HERITAGE SITES.



A NOMINATION FOR THE RECOGNITION OF  
**MORUYA GRANITE QUARRY COMPLEX & GRANITE TOWN**  
AS SIGNIFICANT ENGINEERING HERITAGE SITES.

Presented to the Engineering Heritage Committee of Engineers Australia

This nomination was forwarded to Engineering Heritage Australia for consideration for the award of Engineering Heritage Marker on 6 September 2010 with a copy to the General Manager of Eurobodalla Shire Council.

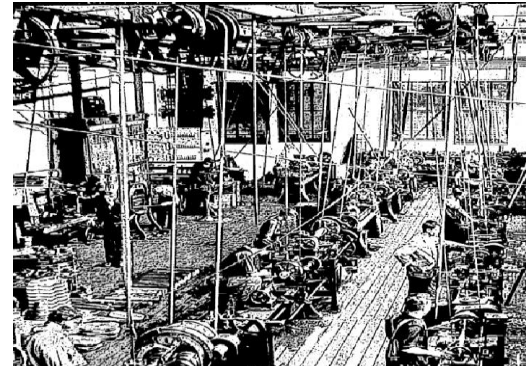
The proposal was given in principle agreement by the Strategic Planner of Eurobodalla Shire Council in correspondence from Council dated 1 September 2010. In principle agreement to holding a ceremony to mark the occasion was also given by Council.

The nomination was approved by the Engineering Heritage Recognition Committee of Engineers Australia with an approval date of 26 October 2010.

J. W. Gibson (Member, EHS)

# HERITECH CONSULTING

ABN 29 804 304 435



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6 September 2010

The Administrator  
Engineering Heritage Aust.  
Engineers Australia  
Engineering House  
11 National Circuit  
BARTON, ACT. 2600

## Nomination for Moruya Granite Quarry Complex & Granite Town

Dear Sir/Mdm,

On behalf of the Engineering Heritage Committee (Sydney Division) I am pleased to forward a nomination for the Moruya Quarry Complex and Granite Town for consideration by EHA of the award of National Engineering Heritage Landmark.

Completed nomination forms A, B, and C are attached, as is a letter from Eurobodalla Shire Council in support of the nomination.

It should be noted that the Council recently held a ceremony to mark the return of the Abernethy Stone turning lathe to the shire, and they are supportive of the EHC move to recognise the Quarry Complex as a significant item of engineering heritage.

Members of the Engineering Heritage Committee await the result of the EHA deliberation on this nomination.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'John Gibson'. The signature is fluid and cursive, with a long, sweeping underline.

John Gibson (for the EHC, Sydney Division)

## Appendix A      Heritage Award Nomination Form

The Administrator  
Engineering Heritage Australia  
Engineers Australia  
Engineering House  
11 National Circuit  
BARTON ACT 2600

**Name of work:** Moruya Granite Quarries, and Granite Town.

**The above-mentioned work is nominated to be awarded a** (delete as appropriate)

National Engineering Heritage Landmark

**Location, including address and map grid reference if a fixed work:** Refer to map on page 2 of Appendix B.

Government Quarry, North Head Drive, Moruya, NSW, 2537

Loutitt Quarry, South Head Road, (The Anchorage), Moruya, NSW, 2537

McCredie Quarry, North Head Drive, Moruya, NSW, 2537

Zeigler Quarry, North Head Drive, Moruya, NSW, 2537

Granite Town, North Head Drive, Moruya, NSW, 2537

**Owner (name & address):** Government/PWD Quarry - NSW Department of Lands (now LPMA) located on Lots 1 and 2 DP 595413 and lot 8 DP 904847.

Loutitt's Quarry – on private property, Lot 117 DP 752151

McCredie's Quarry – on private property Lot 1 DP 127182, and public reserve (755963).

Zeigler's Quarry – on private property Lot 1 DP 588707 Greg & Kay Jay 306 North Head Drive, Moruya and Crown land (Lot 92 DP631493). LPMA

Granite Town – on various private property including Lot 1 DP 588707 and Crown land Lot 92 DP 631493 for future quarry development and heritage conservation.

**Eurobodalla Shire Council has been advised of this nomination and a letter of agreement is attached.**

Rather than erect interpretive panels at five sites, it is proposed that a plaque and panel be placed at an existing interpretation location on Crown Land controlled by Council possibly on the site of the existing Rotary display on the left bank of the river near the government quarry. Contact has been made with Eurobodalla Shire Council and agreement in principle has been obtained to the proposal. Contact with Council is ongoing with a view to gaining agreement for Council, Engineers Australia, and possibly LPMA, to produce a plaque/panel and to organise a suitable ceremony.

Council is currently involved in the erection of a shed adjacent to the Historical Society property within the township which will feature the Abernethy stone turning lathe and other interpretative features of the quarries works.

**Access to site:** Due to the overgrown nature of the sites, uneven ground and possible trip hazards, it would be unwise to encourage unaccompanied members of the public to enter the quarries. It is thus intended to seek Council's co-operation in the installation of the plaque and interpretive panel in the existing pavilion on Crown land on the left (northern bank) of the Moruya River.

The Government quarry is fenced in part, with some public access. The remains of the Government quarry wharf have now been removed but it was on a public reserve (755963). There is already an information pavilion relating to the Government quarry on the left river bank which has public access.

**Nominating Body:** Engineering Heritage Committee, Engineers Australia (Sydney Division)

Simon.Wiltshire

Chair of Nominating Body

Date: 19 August 2010

.....

Chair of Divisional EHA Group

Date: .....

## Appendix B      Heritage Assessment

### 1.      BASIC DATA

**Item Name:** The Moruya Quarries and Granite Town

The Moruya quarries, and the remains of Granite Town are located within an area which has been used for production of granite for various purposes (monumental stone, dimension stone, granite rubble for building, and large stone for building breakwaters) from at least 1864. Except for Loutitt's, all the quarries are located on the left (northern) bank of the Moruya River.

The central item in this area is the NSW Government's granite quarry. This quarry is variously referred to as the Moruya Quarry, the Public Works Department Quarry (PWD) and the Government Quarry. The term Government Quarry is the most appropriate and will be used in this document. The Government Quarry was first developed in 1878 on land acquired by resumption from Henry Ziegler and Joseph Ard in December 1877 for the construction of the Moruya northern breakwater. Construction of a tramway to deliver armour stone to the Northern Breakwater site commenced in 1876 using ballast won from a quarry site located between the Government Quarry and the breakwater.

The Government Quarry has been operated intermittently to supply stone for river improvement and maintenance works since this time. This quarry is best known as the source of the granite facing for the Sydney Harbour Bridge pylons between 1925 and 1932. Surrounding the actual quarry site there are numerous relics associated with its operation: these include machinery and masonry shed footings, the breakwater and river training structures, tramway and stone dressing area earthworks, remains of locomotive service facilities, and relics of water transport facilities (including various wharfs) from several periods. There are also relics of two separate worker housing facilities.

Peripheral to the Government Quarry site are several small private quarry sites (identified on the aerial photograph below), which operated for varying periods between 1864 and 1900. These include

- Loutitt's quarry on the right side of the river which appears to have been the earliest of the Moruya granite quarries to supply stone for significant building works in Sydney. The earliest evidence of the quarry being worked was in 1868, when John Young, contractor for the first stage of the General Post Office in Sydney, took a seven year lease on the land from Joseph Louttit. Between 1868 and 1887 it supplied granite for many well-known Sydney buildings and monuments. Stone was supplied for the colonnade columns of the Sydney General Post Office (first stage), and the pedestals for the statues of Queen Victoria (1888) in Queen's Square, Sydney and Captain Cook (1879) in Hyde Park, as well as other projects. It also reputedly supplied granite for the Sydney Customs House and the now demolished Bank of NSW.

- McCredie Brothers quarry. This was located near the entrance to Malabar Creek, a little further west from Zeigler's quarry and was operated by the brothers who were Sydney building contractors. The precise period of operation is unclear, however they did win the contract which commenced in 1880, to complete the Pitt Street extension to the General Post Office in Sydney, which required extension of the colonnade. McCredies acquired the site in 1884 and operated into the 1890s. The small size of the excavation suggests that its life was brief.
- Zeigler's quarry, the site of which abuts the western boundary of the Government Quarry appears to have been the earliest of the Moruya granite quarries operating from as early as 1864 to about 1890. Henry Zeigler was from a Prussian family that had been stone masons and sculptors for generations. Monumental works and major local buildings such as the Uniting church, the Catholic church and the Anglican rectory in Moruya are examples of Zeigler's work.
- Granite Town: was established on land previously owned by Zeigler and it included the Zeigler quarry. It was purchased by Dorman Long in 1925 to accommodate the stonemasons and other trades contracted to prepare stone for the pylons, etc, of the Sydney Harbour Bridge. The town included bachelor quarters a school, community hall (assumed as located on the site of a Zeigler pit) and store with post office and some 70 cottages catering for a population of 300. With completion of the Bridge nearing, the population dwindled until by the end of 1931, the town was dismantled. The Dorman Long land was eventually sold in 1938. Possession of the quarry was returned to the State Government in 1932 after all machinery and buildings were sold or removed. The depression meant there was little work in the Moruya area to keep people in the town. Possession of the quarry was returned to the State government in 1932 after all machinery and buildings were sold or removed.

**Other/Former Names:** N/A

**Location** The following aerial photograph shows the location of the various items that make up the Moruya Quarry complex:

Government PWD Quarry - S35° 54' 13", E150° 06' 55"

Loutitt Quarry - S35° 54' 41"; E150° 07' 16"

McCredie's Quarry - S35° 54' 12", E150° 06' 41"

Zeigler Quarry - S35° 54' 12", E150° 06' 50"

Granite Town - S35° 54' 09", E150° 06' 46"

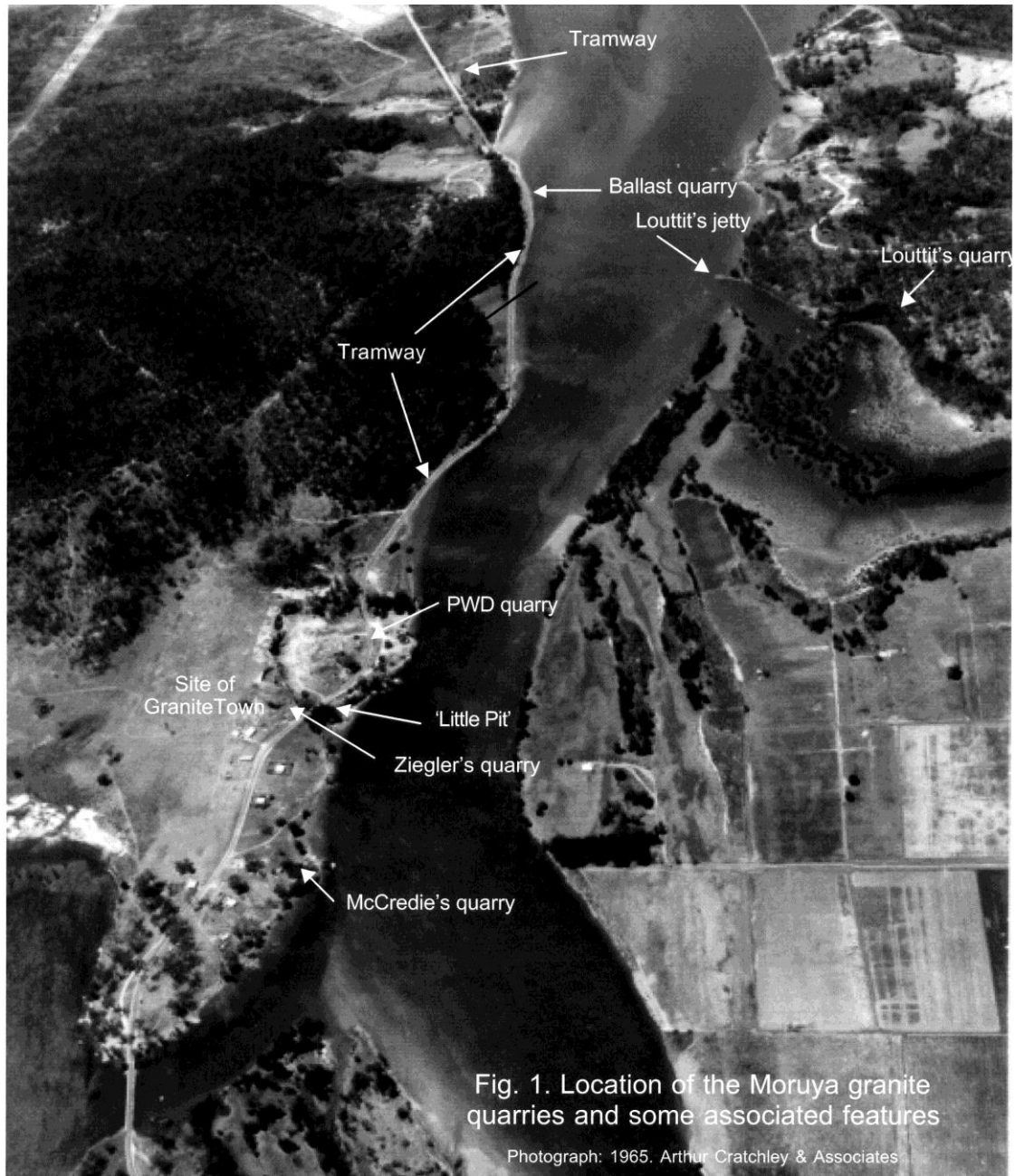
**Address:** Government Quarry, North Head Dr, Moruya, NSW, 2537  
 Loutitt Quarry, South Head Rd, Moruya, NSW, 2537  
 McCredies Quarry, North Head Dr, Moruya, NSW, 2537

Zeigler Quarry,

North Head Dr, Moruya, NSW, 2537

Granite Town,

North Head Dr, Moruya, NSW, 2537



Source: Rogers, B. (1997) A history of the Moruya Quarries

The Government quarry workings are located on Lot 8 of DP 904847 (part of the original Crown acquisition) and Lots 1 and 2 of DP 595413. Granite Town remnants are located on Crown land Lot 92 DP 631493, privately property Lot 1 DP 588707, and Zeigler's quarry is located within Crown land Lot 92 of DP 631493 and private property Lot 1 DP 588707

The remnants of the wharves from three quarrying phases, remnants of processing plant and buildings from the Harbour Bridge era and part of McCredie's quarry are located within Reserve 755963. Some of these remnants have recently been removed for safety reasons.

<b>Suburb/Nearest Town:</b>	Moruya
<b>State:</b>	NSW
<b>Local Govt. Area:</b>	Eurobodalla Shire.
<b>Owner:</b>	Various - NSW Land and Property Management Authority formerly Department of Lands/ Eurobodalla Shire Council/ Private.
<b>Current Use:</b>	Government quarry is used as the need arises, others are unused.
<b>Former Use (if any):</b>	N/A
<b>Designer:</b>	Refer to historical notes below.
<b>Maker/Builder:</b>	

	<b>Year Started:</b>	<b>Year Completed:</b>
Government Quarry -	1875	Still active quarry
Loutitt's Quarry	1854	1895
Zeigler's Quarry	1864	1890s
McCredie's Quarry	1884	1890s
Granite Town	1925	1930s

**Physical Description:** The four quarry sites are typical of hard rock quarries with near vertical faces cut out of the exposed rock, large blocks of stone resting on the floor of the quarry, and much rubble. There are few remnants of quarry machinery/equipment. The Government quarry continues to operate on an 'as needs' basis to supply armour stone for breakwater, training wall and riverbank maintenance.

With respect to the Loutitt's quarry, the roadway from the quarry to the wharf is an impressive structure. Granite blocks and off-cuts were used to construct this roadway and the large granite blocks were dragged and manhandled into place by horse and manpower. Along this track are the remains of an old home site. Some foundation piers are evident as are original garden plants and some fruit trees, Fig and Quince. There is another home site to the west of the Quarry, but all that remains is a clearing and small garden area and

evidence of some attempt at quarrying a small patch of granite. It is probable that these homes were associated with the quarry.

McCredie's quarry - A well defined quarry face is still visible.

Zeigler's Quarry - there is some evidence of the quarry still visible.

Granite Town - The Heritage Inventory form lodged at the Heritage Branch, Department of Planning, notes the "Remains of Granite Town comprising 11 stone hearths, floor stumps and building debris." (Heritage Branch, 2007). The history of the town is dealt with in detail in the research paper by Rogers pp100 – 132.

**Physical Condition:** The four quarry sites are reasonably overgrown with underbrush. There is no evidence and it is unlikely that stone from Louttit's, Zeigler's or other private quarries were used in breakwater or training wall works.

Pilot, Captain John Ross arrived in 1861 to construct the southern breakwater. Contract for the breakwater stone was with F White in Aug 1861. Ross sent granite samples to Colonial Architect James Barnett in 1865.

Zeiglers quarry was on privately held land acquired by Dorman Long for Granite Town and not on Crown land until 2001. This land also contains what was referred to as "The Little Pit" (not the third pit), developed by Dorman Long on the boundary and subsequently developed to connect to the Government Quarry. The "Little Pit" was opened to source large stone including for the Cenotaph block as a basalt dyke running through the Government quarry was restricting block size by that time.

There were two stone dressing sheds. The existing North Head Drive lies through the centre of the northern stone dressing shed. The area to the west of and adjacent to the quarry entrance contains the power house footings. Crude oil powered engines within the power house produced compressed air and electricity.

Joseph Loutitt arrived in Australia on 5 October 1858 and therefore could not have opened the quarry prior to this date. There is no reliable record of Loutitt granite being used on training walls or breakwater which was constructed in sandstone from 1861.

**Modifications and Dates:** Refer to historical notes below.

**Historical Notes:** Historical notes relating to the quarry sites are provided on the following pages. The information has been sourced from a research report prepared by Mr. Brian Rogers "*A reconstruction of a history of Moruya Granite Quarry*", an unpublished work in progress dated July 2010. The statement on Granite Town was sourced from the web site <http://www.eurobodalla.com.au/historyheritage.html> and from Roger's work. It should be noted that historic data on the Quarries produced in the Council's Heritage Inventory form contains some errors.

### **History of Loutitt's Quarry**

Joseph Louttit was born 18 October 1826, the fourth child to John and Catherine (nee Flett) in Stromness, Orkney Islands, Scotland. His brother, John Flett Loutitt was born in 1828. Joseph involved himself in various enterprises which included sailing a cutter between Sydney and Moruya, and providing supplies by packhorse to the Araluen Goldfields. Joseph decided to make his home in the Moruya district. He sent for his brother John and they purchased land on the south side of the river near where Louttit Creek enters the river at a place now known as 'The Anchorage'.

There is conjecture as to when the Loutitt's opened and started working their quarry but it seems most probable that the quarry was opened on their land about 1868 by John Young, contractor for the main structure of Stage 1 of the Sydney General Post Office. Young leased the quarry to provide stone for columns forming the St Martins Lane colonnade. Young constructed a stone jetty capable of taking heavy loads and a tramway made with wooden rails to bring stone from the quarry to the jetty. Young's lease expired in 1875.

It is most likely that after Young, the quarry was leased to other operators. There is evidence to suggest that some of the Loutitt family worked in the quarry, as John Loutitt was seriously injured in 1878 whilst helping to move the 15+ ton block for the base of the Captain Cook statue that now stands in Hyde Park, Sydney.

Other products from the Loutitt quarry include the base of the Queen Victoria statue in Queen's Square, Sydney (1888), and the Moruya branch of the Bank of New South Wales (1873) in Vulcan Street.

The Quarry is in excellent condition albeit somewhat overgrown by light scrub with some remains of the jetty and tramway embankment still present in 1997.

## **History of Zeigler's Quarry**

The Zeigler family quarried granite on the left bank of the Moruya River at Pompey Point for building and monumental purposes from at least 1864. Henry Zeigler was born in Saxony, Prussia, c 1838 to a family of stonemasons and sculptors. He arrived in Melbourne in January 1860 and ended up settling in Moruya c1863.

All three of the granite quarries on the left bank of the river lie on the 1100 acres of land originally granted to surgeon James Ellis in 1840. In May 1845 the grant was transferred to Sydney financier Thomas Walker. The property later came under the Real Property Act in 1868 when Henry Zeigler and his father-in-law Joseph Ard became tenants in common in 1867. However there is evidence that Henry was quarrying granite on this site for the Moruya Wesleyan Church as early as 1864.

In 1876 and 1877 the Crown resumed two small areas of the grant for the supply of stone for the construction of breakwaters.

Henry Zeigler became the sole owner of the property in 1884 after the death of Ard in 1881. The land remained in Zeigler's name until c1894, but in 1884 he sold a block of some 3 acres in the south western corner to Thomas McCredie. Henry died in January 1887 with the estate and business willed to his son Joseph. Joseph, and possibly other family members, lived on the property until at least 1893 when the mortgagee exercised his right and sold the property in June 1893 to Henry Thompson and his heirs. In 1900 it was purchased by Henry Boot who sold it in 1925 to Dorman Long & Co the builders of the Sydney Harbour Bridge. There is no evidence to indicate that quarrying was carried out on the site in the 32 year ownership by Thompson and Boot.

The business directory in an 1875 almanac published in Moruya lists Mr. Henry Zeigler, monumental stone works, Pompey Point, but the exact location of the works at Pompey Point has not been identified. In 1890, however, son Joseph and his brother Rudolph moved the works into the town itself. Headstones bearing the Zeigler name in the Moruya Cemetery show that the business carried on under this name until at least 1924.

As well as monumental masonry, the Zeigler's supplied building stone. At least three major buildings in the town were built with granite supplied by the Zeiglers – the Uniting Church, the Anglican rectory and the Roman Catholic church. They also provided 30 000 tons of 'stone cube' sets for the Government tramway in the early 1880s and produced some columns for St. Mary's cathedral in Sydney in the 1860s.

The transport of stone from the quarry to the township, and up the coast to Sydney would have been expedited with a suitable wharf; the road trip to Moruya was a long distance before the construction of the Malabar bridge over the river. There are references to 'Zeigler's wharf' but its location has not been determined.

### **History of the Government Quarry**

This quarry is also referred to as the Moruya Quarry or the PWD Quarry.

It was not until 1875 that the first active steps were taken toward constructing the northern breakwater on the left bank of the Moruya River. Preparation included the construction of several kilometres of tramway from the quarry to the site and the resumption of land for two quarries; one for tramway ballast, the other for breakwater armour. The ballast quarry, or 'the old quarry', consisted of shaly metasediments and was located well to the east of the site of the Government Quarry.

In May 1875 Thomas Bartholomew was awarded the contract by NSW Public Works Department to form and lay a tramway on the left bank of the Moruya River. From the breakwater, the tramway ran westward, mostly in a straight line to the 'old quarry'. To the west of the 'old quarry' the tramway was carried on embankments over some tidal flats. At the Government or 'new quarry', east of Zeigler's quarry on Pompey Point, the line terminated in a single track along the quarry face near the river bank. This quarry supplied the granite for the breakwater.

The first contract for the breakwater was awarded to Bartholomew in 1876 who worked the quarry until funds ran out in 1882 and the contract terminated. Construction resumed early in 1884 under Mr. Russell however after several serious accidents at the quarry work ceased in 1885 and was not resumed for many years.

Between 1885 and 1924 the Government Quarry appears to have been used exclusively and intermittently to supply stone for training walls and riverbank protection. However, by the time works were finally completed on the breakwater in the mid-twentieth century commercial shipping on the river had almost ceased.

## **The Government Quarry and the Sydney Harbour Bridge**

Whilst the Minister for Public Works reserved the Pompey point quarry to supply stone to the Sydney Harbour Bridge; according to the contract the contractor was not obliged to use the quarry. The contractor could make any arrangements to obtain the stone. However, J J C Bradfield personally favoured the Moruya stone.

Dorman Long & Co purchased the quarry land for 1200 pounds in May 1925 and continued until 1938 when it was sold to a Moruya farmer. Dorman Long & Co appointed a Scot, John Gilmore as the quarry manager. He and his family left Liverpool (UK) in September 1924 and arrived in Moruya in November of that year. Local men were employed for the first year, and other Scotsmen joined the workforce later on. The site was levelled and the quarry face cleared of soil. In January 1925 a new wharf was commenced. The assembly of up to date plant, and the construction of buildings proceeded throughout 1925.

With the exception of the steam cranes and the two petrol locomotives, all the equipment at the quarry was powered by either electricity – generated on site, (compressors, crushers, conveyors, etc) or compressed air (rock drills, stone surfacers, hand dressing tools, etc). Once the quarry was in full operation there were two blacksmith's shops for sharpening rock drills and stone dressing tools.

From the evidence available the quarry operation followed standard practice for the period. In blasting operations, small charges of black blasting powder were used, as low velocity explosives were most appropriate for producing dimension stone.

Dressing the stone to size and shape was carried out using pneumatic hand tools and this was mostly done in the mason's sheds. Machine surfacing was used where stone faces had to be finished smooth.

In addition to producing dimension stone the quarry produced considerable quantities of concrete aggregate for the bridge skewbacks and other footings. Whilst the demand for stone for the bridge existed, requests for supply to other works were passed over. However, at least four jobs of a monumental nature were completed at this time. These included the Cenotaph for Martin Place in Sydney (1927), a pedestal for a statue at St. Mary's convent, Moruya (1931), a war memorial for the town of Araluen (1931), and the Dorman Long & Co memorial in St. Michael's, Vacluse erected by Lawrence Ennis (Director of Construction for the Bridge).

Before withdrawing from Moruya, Dorman Long & Co sold off everything which could be taken away from the quarry. They left a few concrete foundations and some blocks of stone. With the sale went the 1920s hopes that this was the beginning of a new enterprise. The quarry reverted to the NSW Public Works Department and was left idle for nearly two decades.

The demand for stone fell away during the depression - the tendency was for stone to be imported from overseas, and by 1942 the use of granite as a building material had fallen off considerably. By 1940 the rails of the tramway had long been removed as part of the war effort and the embankment had become a road to North Head. Between 1945 and 1947 the Dorman Long quarry wharf was demolished and a new wharf built.

The quarry was re-opened in 1947 to carry out further works on the training walls of the river. It was necessary to reconstruct the wharf, lay a tramway and install fixed plant. Initial work included the repair and extension of the breakwater, followed by the extension of the southern training wall. Work ceased due to a shortage of funds in 1952, and recommenced in 1953, but its life was short closing again in 1954. Since then the quarry has been worked on a needs basis and very intermittently since then.

### **History of McCredie's Quarry**

Thomas McCredie purchased land at Pompey Point, Moruya in August 1884 but until a plan dated 1890 was discovered, there had been some doubt as to whether the land was used as a quarry. The plan shows a well developed quarry about 1000 m west of the Government Quarry site near the river bank. McCredie and his brothers were principals of a major Sydney building firm which won the contract for the second stage of the Sydney General Post Office. This comprised extending the building to Pitt Street and included the foundations and drainage (as it is over the Tank Stream), the clock tower and extension of the St Martin's Lane façade, which has a colonnade with round columns of Moruya granite. These extensions appear to have begun in October 1881.

Members of the Zeigler family claim that, while Zeigler actually worked on the turning of the General Post Office columns, the stone did not come from his quarry: this claim fits well with the McCredie's owning their own quarry.

The McCredie quarry had a wharf and a derrick crane and it is possible that Zeigler transported stone from his quarry, from these facilities.

## **History of Granite Town**

Due to the fact that work on the Sydney Harbour Bridge had absorbed most of the Australian masons, and that Dorman Long & Co had recruited over 200 masons and other granite workers from Scotland, Italy and other countries, the company established the village of Granite Town in 1926 to house the workers and their families. Early arrivals such as engineers and foremen were initially accommodated in the town of Moruya.

The town was established on an exposed treeless area of ground to the north west of the Government quarry. About 70 houses were built, construction being monitored by the Company foreman carpenter, Harry Dunne of Bateman's Bay. The houses were built of hardwood from Narooma lined with Baltic Pine, and of simple design. Houses consisted of three or four rooms, a wash house, an outhouse and were supplied with water. A sanitary service was provided by the Eurobodalla Shire Council. Despite the generating capacity of the quarry the Granite Town houses had no electricity and there were no streetlights.

Many single men lived in 'barracks' near the river to the west of the quarry.

Population in the town varied with the needs of the quarry and by March 1927 it was recorded as 304. A community spirit grew from the beginning and this was enhanced with the formation of a progress association in 1926.

A public hall was constructed in 1927 and opened in September of that year.

A lease for 10 years from the Company to the Department of Education allowed the construction of a school in 1926 to accommodate 50 students. Granite Town also had a co-operative general store and a post office

A lively branch of the Australian Worker's Union was also established by the skilled tradesmen.

By 1929 quarry activity was being scaled down as the focus shifted to Sydney for the final dressing of the bridge pylons. Then, in 1932 as the now famous steel arches spanned the Sydney sky, the Scots left Granite Town and the houses were bought by local people and shifted to house blocks around the district. The public hall was sold in August 1931. Many quarry workers moved and made their homes in Moruya

## **Contributions to the Community**

### **Government Quarry**

Permanently open entrance to the Moruya river.

Harbour Bridge, Sydney - piers and pylons

Cenotaph, Martin Place, Sydney

Catholic Church, Moruya - convent statue base

War Memorial, Araluen

Saint Michael's Church of England, Vaucluse. A monument to commemorate the association of Mr Ennis, and other members of the staff of Dorman Long and Co, with the church.

Monument to Moruya quarrymen in Moruya town centre.

#### Loutitt Quarry

General Post Office (first stage) colonnade columns, Sydney

St Mary's Cathedral, Columns to the confessionals

Buildings around Moruya, including the Bank of NSW building in Vulcan Street

Columns on the front of the Customs House, Sydney

Pedestal for the statue of Captain Cook in Botanic Gardens, Sydney

'Tonalite' pedestal for the statue of Queen Victoria in Queen's Square, Sydney.

#### McCredie Quarry

General Post Office (second stage). Foundations in 1880 and façade and colonnades about 1883.

'Granite' for the Chief Secretaries building, Bridge Street, Sydney

Tonalite' pedestal for the statue of Queen Victoria in Queen's Square, Sydney.

'Granite' for the Burns Philp building, Bridge Street, Sydney

#### Zeigler Quarry

Structural stone for buildings locally

Stone blocks for monumental work locally and in Sydney

#### Heritage Listings (information for all listings)

**Name:** Eurobodalla Shire

**Title:** Local Environment Plan/ State Heritage Inventory

**Number:** SHI/ Database No's. 1550153, 1550253, 1550144

**Date:** 30 July 2010

## **2. ASSESSMENT OF SIGNIFICANCE**

**Historical significance:** The granite quarries of Moruya have historical significance for both the people of the town of Moruya, many of whom are descended from the early quarry workers, and for the people of the State and the nation.

The Government Quarry is one of the few quarries still operating that was opened as part of the grand plan by engineer E O Moriarty to provide permanently open entrances for the development of coastal transport to New South Wales coastal townships.

The Moruya granite columns of the Colonnade of the General Post Office (GPO) sourced from the Louttit's and McCredie's quarries contributed significantly to the dramatic change in appearance and the status of Sydney, marking a new era. The GPO is a Sydney landmark and perhaps the most monumental and most appreciated building in the city.

The Sydney Harbour Bridge, with 'granodiorite' facing on the pylons from the Government Quarry, was again a major project that was significant in the change in appearance of Sydney and identified another era. Moruya granite contributes to the international significance and values of the Sydney Harbour Bridge (a National Engineering Heritage Landmark and on the NSW State Heritage Register) which is fundamental to local and international visitors love of the Harbour, the City, and the Bridge. The sourcing of skilled labour for a specific major project such as the bridge also significantly contributes at an international level to Australia's and other nations migration histories.

The Government on North Head Drive is particularly significant not only as the source of granite for the Sydney Harbour Bridge pylons, but as the source of stone for the Martin Place Cenotaph. The Cenotaph, which is on the NSW State Heritage Register, has been the focal point of ANZAC Day celebrations since it was completed in 1929.

The cultural [historical/aesthetic/social] significance of the granite quarries of Moruya is also reflected in the existence of much of the stone used in many other large commercial buildings and memorials throughout Sydney.

**Historic Individuals or Association:** The Moruya quarries have associations with Colonial Architect James Barnet and Engineer J J C Bradfield and to a lesser extent E O Moriarty (Chief Engineer Harbours and Rivers Branch of the Public Service who was responsible for the major improvement works for transport into the States river entrances), Lawrence Ennis

(Director of Bridge Construction) and with the notable Australian sculptor Sir Bertram MacKenna, designer of the Cenotaph.

The Louttit and McCredie quarries have associations with the first and second stages of the General Post Office, while the Government Quarry has associations with the bridging of the Sydney Harbour, under the supervision of J J C Bradfield, who was also on the Memorial Committee for the Cenotaph and instrumental in selecting the stone for these two items.

**Creative or Technical Achievement:** Stone from the Loutitt's, McCredie's and the Government Quarry (including the "Little Pit" on Zeigler land) was specifically selected as a major element to ensure some of Sydney's most significant and iconic structures were aesthetically distinctive and attained State to international recognition.

While not innovative, the intricate works of quarrying, shaping, shipping and sculpting Moruya granite for the General Post Office, Bridge and Cenotaph stonework, are counted as highly technical achievements that culminated as key events in Australian history.

**Research Potential:** The remains of the quarries, and their location with respect to the Moruya River as a transport medium, together with the photographic record of works, provide a source of data that enable research into the processes, equipment and the products developed over time. There is some research potential in the way the quarrying and Granite Town interacted with the established local community and their local impact after the quarries closed. There is also potential for research of Australia's and other nations migration histories, such as that recently carried out by Mr. Bill Glennie of Scotland.

**Social:** The quarry complex, with the former Granite Town, are significant from a social point of view as they represent forms of social organisation such as quarry workers, immigrants, unionists, families, in constant interaction with the established community of Moruya and other groups such as farmers, shopkeepers and industrialists. The large number of workers, and their families, who emigrated to Australia from Scotland and Italy and made their home and workplace in Moruya is also significant.

**Rarity:** The quality of the granite quarried along the Moruya River (there are four known granite quarry sites) and the relative ease of shipping from these quarries to the metropolitan markets was rare, in the history of NSW granite quarrying.

**Representativeness:** The quarry sites do not express a degree of representativeness other than in very general terms. They are typical of various types of quarry in broad terms (extraction methods, dressing technology, and possibly transport. But they do not represent a particular class or subdivision of the quarry trade.

**Integrity/Intactness:** Whilst the stone ramparts of the quarries still exist to give an indication of the nature of the workplace, little of the physical evidence of the technology remains on site, For example, the remains of the tramline from the Government and Dorman Long & Co quarries; and the associated Quarry wharf [first established in the late C19th] are now only archaeological sites, without adequate protection.

**Proposal for an Interpretative panel for the site:** It is proposed that as well as an EHM plaque, an interpretative panel focussing on the history and engineering of the quarries be erected. Possibilities for inclusion on the panel would be a map as per Rogers (1977, A history of the Moruya Quarries); a brief history of each of the four quarries; a number of images showing the engineering technology such as the Abernethy lathe, the first black powder blast at the Dorman Long & Co quarry, the Cenotaph stone, John Gilmour, the 1926 photo showing the railway line from Quarry to wharf, an image of a steam crane in use at the Quarry and the placing of stone on the Sydney Harbour Bridge in 1931.

It is envisaged that the panel would be A2 format (600 x 1200 mm), images engraved on aluminium, suitably coated for protection.

Sources for these images include M&DHS, Nell Grieg, SLNSW, AONSW

## **References & Acknowledgements:**

The assistance of Mr. Royce Toohey (Assets Engineer, Eurobodalla Shire Council), Mr. Brian Rogers (heritage consultant), Mr. Scott Renwick (former government quarry manager) and Mr. Peter Freeman (Architect) in the provision of information used to develop this report is gratefully acknowledged. The assistance of Mr. Michael Clarke is also acknowledged.

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[http://www.centennialparklands.com.au/resources/history\\_and\\_heritage/heritage\\_buildings\\_and\\_structures/federation\\_pavilion](http://www.centennialparklands.com.au/resources/history_and_heritage/heritage_buildings_and_structures/federation_pavilion)

<http://www.townsinaustralia.com/Moruya/875.htm>

<http://investigator.records.nsw.gov.au/asp/photossearch/search.asp?subject=quarries&s8B1=search>

<http://www.eurobodalla.com.au/historyheritage.html>

**Statement of Significance:** Sandstone had been quarried in Sydney from 1823 and by 1836 Colonial Architect Mortimer Lewis was using sandstone for public building construction. Marble was also being quarried in Marulan by 1838. However it was not until the mid 19<sup>th</sup> century that extensive hard rock quarrying got underway.

Hard rock quarrying was first started at Moruya about 1863 at Zeigler's quarry. Eventually four significant quarries were established. While the Moruya River breakwaters were constructed with rock from the government quarry, the rock from all four granite (granodiorite and tonalite) quarries was an important element in monumental, ornamental and building construction, because the Moruya granite was of such good quality and consistency.

The Moruya quarries supplied rock for many of Sydney's heritage structures and landmarks such as the pylons for the Sydney Harbour Bridge, the colonnade columns of the General Post Office, columns for the Chief Secretaries and Burns Philp buildings, the Martin Place Cenotaph and the pedestals for monuments to Captain Cook and Queen Victoria.

Through the foregoing works and others, the quarries have associations with historic figures such as Engineer-in-Chief, Harbours and Rivers Department of Public Works, E O Moriarty, (among other things designer of the grand plan to construct NSW river entrance works to improve coastal transport), Colonial Architect, James Barnet, (amongst other things designer of the GPO, the final stage of the Customs House and the pedestal of the Queen Victoria monument); Chief Engineer for Metropolitan Railway Construction and Sydney Harbour Bridge J J C Bradfield; the notable Australian sculptor and designer of the Cenotaph Sir

Bertram MacKenna; and Dorman Long's Director of Construction for the Harbour Bridge, Lawrence Ennis.

The quarries and the former Granite Town are significant as they represent a social structure derived from the coming together of quarry workers, Scottish immigrants, unionists and their families. These workers were in constant interaction with the established community of Moruya and others such as farmers, shopkeepers and industrialists. Eventually a large number of workers and their families made their home and workplace in Moruya and influenced the social life and culture of the town.

It is significant that the specific selection of granite from the Moruya quarries was used as a major visual element in such nationally important landmark structures. The GPO, Sydney Harbour Bridge and Cenotaph not only are consistently portrayed at a national and often international level but as projects also mark significant historical phases or milestones in the changing face, development and nationalism of Australia.

**Level of Significance** (whether National, State or Local)      **National**

After assessing the significance of the Moruya quarries and Granite Town using the Appendix C checklist in the *Heritage Recognition Guidelines*, it is recommended that the Moruya Granite Quarries be recognised as a National Engineering Heritage Landmark (the completed checklist is attached).

### Image(s) with caption(s):

**NOTE:** The following set of images are NOT original digital images, but are provided as a means of determining potential images for inclusion on an interpretative panel. The original digital images have been copied for this report from originals held by Brian Rogers, author of "A reconstruction of a history of Moruya Granite Quarry" July 2010

Captions can be provided for selected images when required.

Suitable images can be selected from those referred to on page 8, and those provided below.

Other images potentially suitable for a panel can be sourced from Moruya & District Historical Society.



Fig 64

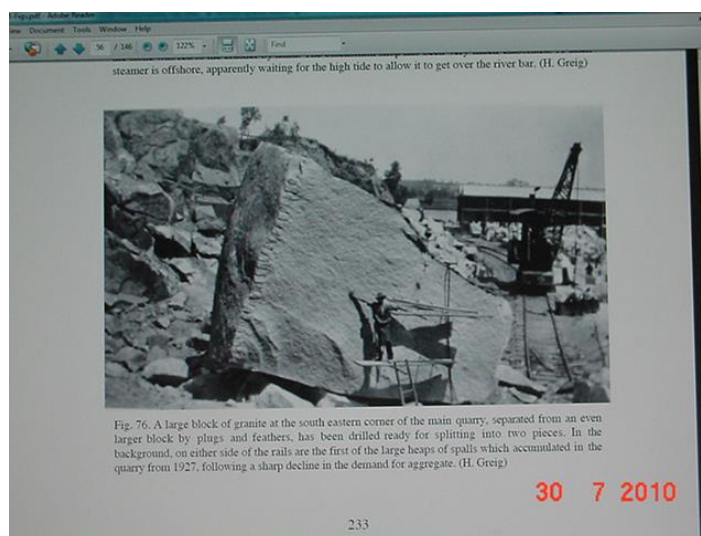


Fig 76



Fig. 84. A five-ton steam crane with a 2½-ton steel ball hammer, spalling large stone into pieces suitable for the Baxter crusher, which was located under the small skillion at the western end of the aggregate bin. Skips used to carry stone to the crusher have been lifted from the tramway and placed near the rock to be hand loaded. The pole framework to the right of the aggregate bin is for the smithy, which later served the western quarry. The purpose of a narrow gauge tramway running westward along the low terrace near the river is not clear. To the right of the is a coal heap. (11.6.1926. AONSW)

30 7 2010

Fig 84



Fig. 89. A 5-ton steam crane at work on the quarry wharf in May 1925. At the right of the photograph can be seen part of the formwork for the foundation of the aggregate bin. (H. Greig)

30 7 2010

Fig 89



30 7 2010

Fig 93

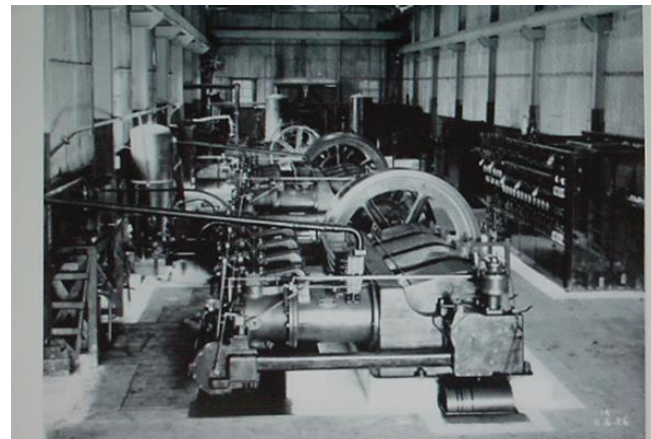


Fig. 100. Interior of the power house at Moruya quarry, viewed from the western end. The two generator sets are nearest the camera and the compressor unit can be seen at the rear. The floor of this building was constructed. This is visible in the floor to

30 7 2010

Fig 100



Fig 108



Fig 113

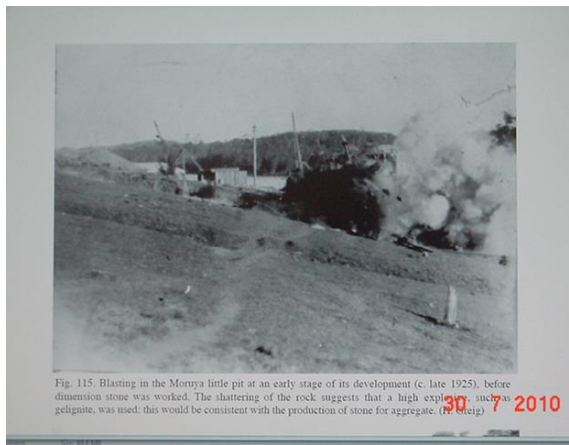


Fig 115

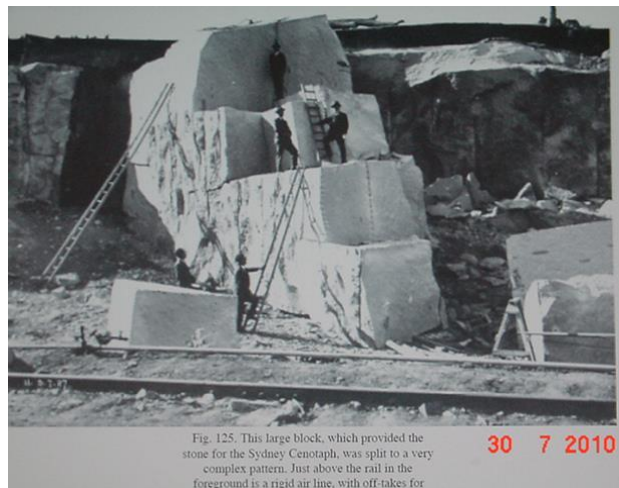


Fig 125

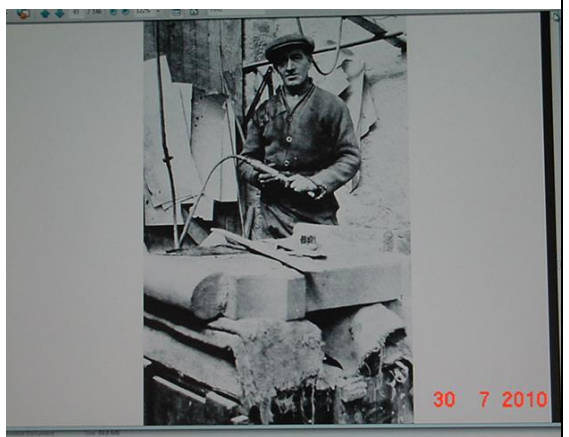


Fig 131



Fig 132

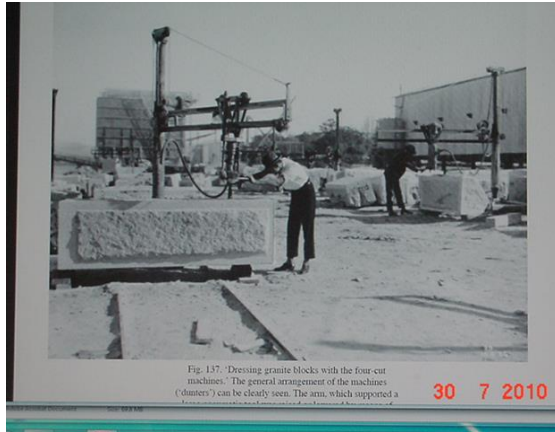


Fig 137

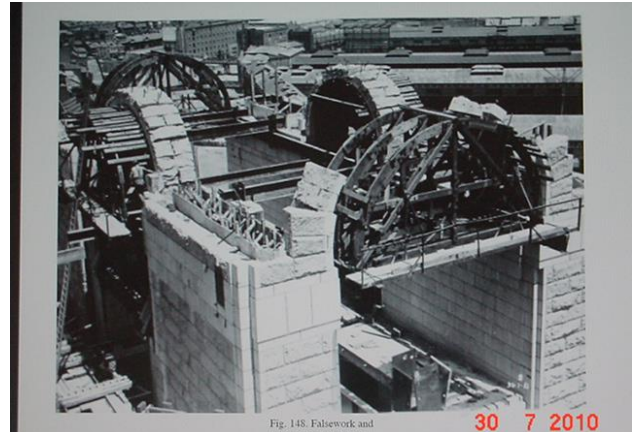


Fig 148

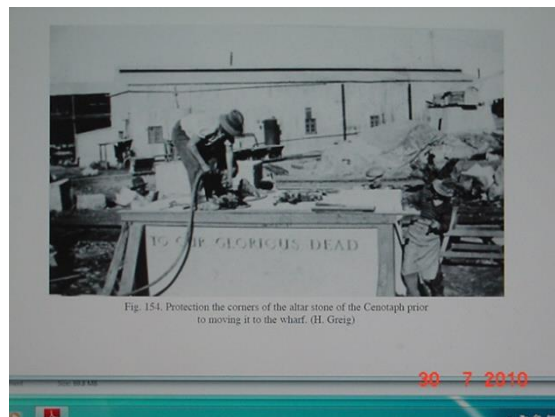


Fig 154

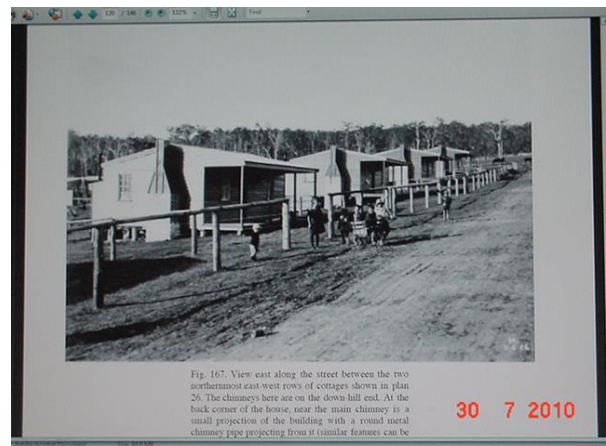


Fig 167



Fig 186

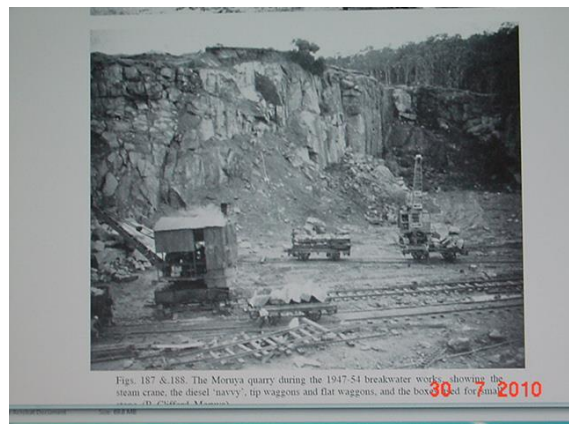


Fig 188

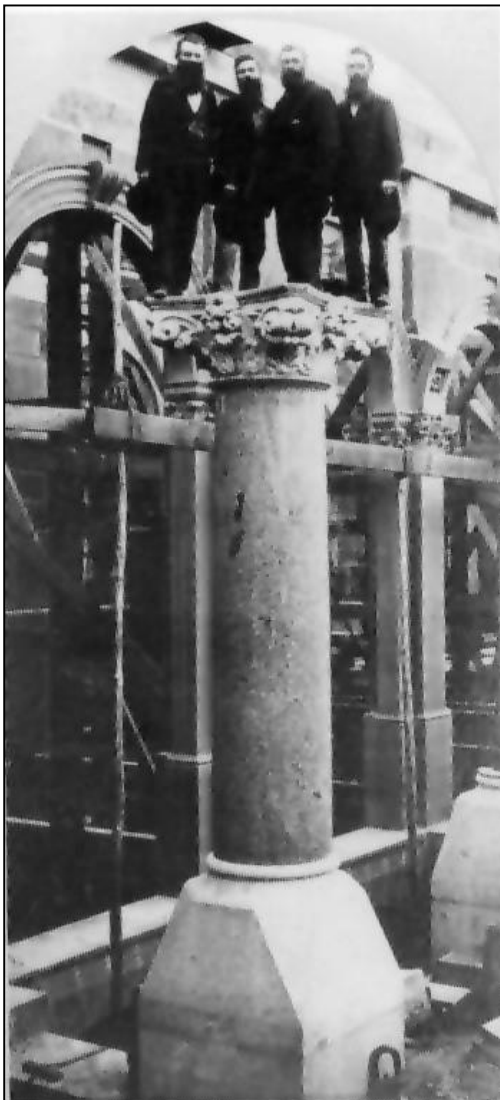
## Attachments

### The History of the Sydney G.P.O. – the City's Centrepiece

#### The Pitt Street extension

##### Page 34:

At the opening of the George Street section of the General Post Office in 1874, Barnet said that this part of the building completed only half the design and that it was intended to continue it to Pitt Street - a length of 353 feet (107.5 m.) and a width of seventy-eight feet (23.8 m).



Looking proud and serious, the McCredie Brothers, principal contractors for much of the Pitt Street extensions, pose on one of the granite columns of the colonnade

The completion and occupation of the first stage of the new General Post Office in 1874 was an improvement on the way the Post Office had operated in the past. However the expanding community and its needs placed heavy loads on the postal and telegraph services and gave rise to continuing pressure for more and more accommodation. Political instability and bureaucratic indecision still continued to frustrate progress in extending the building and completing the plans Barnet had presented in 1864. After five years and five more changes of Government, tenders were called for the second stage of the building completing the main facade to St Martin's Lane and extending the building to Pitt Street in 1879. Barnet modified the design to include a tall central tower or 'campanile' incorporating a clock and peal of striking bells. Builders were given the alternatives of tendering for the entire building for a lump sum or for submitting tenders by stages (*Government Gazette* 16 December 1879). In February 1880 the firm of McCredie Brothers won the contract for the foundations and drainage and all subsequent contracts with the exception of that for the iron work which went to Mort and Co. (*Sydney Gazette* 17 February, 16 August 1880, 14 March 1881, 24 October 1883).

The contractors opted to leave the Tank Stream drain intact, and relieving arches were built over it.

A well'. . . 80 feet deep [24.4 m.] was found by the contractors to yield such a large and

constant flow of excellent water, that for the remainder of their contract they never had any occasion to avail themselves of the supply of city water for carrying on the work.'

The tower was built over Sydney's famous Tank Stream sewer, which provided the main sewerage outlet for early Sydney town. The contract specified that workers were required to 'solidly shore up the Tank drain; plank and puddle the perforations of sides and bottom; or remove the drain and put in a temporary sluice box of sufficient capacity and rebuild the drain in a similar manner when the foundations were in'.

DEPARTMENT OF PUBLIC INSTRUCTION.



TECHNICAL EDUCATION BRANCH,  
JAMES NANGLE, SUPERINTENDENT.

Technical Education Series, No. 19.

Technological Museum, Sydney.

Building and  
Ornamental Stones  
— of —  
Australia.

1915.



By  
R. T. BAKER, F.L.S., &c.,  
CURATOR.

PUBLISHED BY THE AUTHORITY OF THE GOVERNMENT OF NEW SOUTH WALES.

# Building and Ornamental Stones of Australia.

## *(a) - HISTORICAL*

THE specific literature on this subject, since the foundation of the first Colony in Australia 1788, is very limited. The most important factor militating against excellent building material in the past by the settlers was, no doubt, the abundance of such a good substitute as our hardwoods. However, in the case of Sydney, the Hawkesbury Sandstone, so abundant in the neighbourhood, was early employed by architects and builders and this has remained the principal stone for this purpose to the present time.

It was not till nearly forty or fifty years after the English occupation of the continent that marble was brought into use, as shown in "Mitchell's Expedition into Australia," published in 1838, vol. II P. 318, where occurs this reference:- "Near the Wollondilly, and a few miles from Towrang, a quarry of crystalline variegated marble has been recently wrought to a considerable extent, and marble chimneypieces, tables, &c., now ornament most good houses at Sydney. This marble occurs in blocks over greenstone, and has been found only in that spot."

Investigation has proved that this was in the locality or district which is now known as Marulan, and an authenticated specimen of that time is here illustrated. It is a mantel-piece taken from the house known as Barcom Glen, near Darlinghurst (now demolished), belonging to the late Mr. O. West. It is a beautifully coloured variegated marble, the white patches running very closely in texture to some of the Onyx Marbles of Mexico, with blotches of a rich red colour, and is probably one of the most handsome marbles found in New South Wales.

In the Great International Exhibition of 1851 in London, there appears to have been no exhibit of building and ornamental stones from Australia proper, but Tasmania is credited with the following:- Marble-Maria Island; partially dressed; sent by W. Stoutt. Marble - Maria Island; cut and dressed as paper weights; sent by J. Boyd. Grey Granite - Flinder's Island; sent by J. Mulligan. Granite - East Coast of Van Diemen's Land; sent by J. Mulligan. Granite - Hampshire Hills; sent by J. Mulligan. Porphyritic Granite - Webb's Harbour; sent by J. Mulligan. Limestone - Fingal and Break-o'-day; sent by J. Mulligan. Limestone - Maria Island; His Excellency Sir H. J. Denison. Limestone - Mersey River, between Hobart Town and Bridgewater. Limestone - From foot of Mt. Wellington; J. E. Bickero.

In the Paris Exhibition of 1855, the Commissioners of New South Wales exhibited a White Marble from Abercrombie, and a Green Marble from Emu Swamp. At the same Exhibition, Mr. W. Patten, of Sydney, exhibited a specimen of Argyle Marble (Marulan).

The next Exhibition record is the International Exhibition of London, in 1862, where the Colonial Architect, New South Wales, Mr. A. Dawson, contributed stones and timber used in building. viz:- (1) Eight specimens of sandstone from Sydney and suburbs; (2) Six specimens of sandstone and one of granite, from the Hunter River district; (3) One specimen of trachyte,

## Book Extracts: Moruya Granite

**1. Spearritt, Peter**, 75<sup>th</sup> anniversary edition, 2007, The Sydney Harbour Bridge: a life. ISBN 978068409252, 0 86840 925 1.

Pp 39-40.

At the conclusion of his Sydney Harbour Bridge: Report on Tenders Bradfield wrote:

*Future generations will judge our generation by our works. For that reason and from consideration of the past, I have recommended granite, strong, imperishable, a natural product, rather than a cheap artificial material for the facing of the piers ...*

Pp. 53-54

The State governments of the day - both Labor and non-Labor - did everything in their power to smooth Dorman Long's path: including the provision that the government would foot all wage increases after the contract date. Bradfield had specified in the contract that the piers and pylons had to be faced with Moruya granite. The State government gave Dorman Long free access to its Moruya quarry for the 15 300 cubic metres of masonry required. Such a large job soon absorbed most of the available masons in Australia and over 200 masons were imported from Scotland.

With a population just over 1000, Moruya could not cope with such an influx so in 1925, in the best traditions of corporate paternalism, the company provided 72 wooden cottages for the 250 workers and their families, along with a village store, post office and social hall. The Education Department provided a school and the settlement soon earned the nickname 'Granite Town'.

P. 54

Contemporary film of both the Moruya quarry and the Bridge construction shows just how dangerous conditions were. Although the quarry was only 100 metres from the wharf, moving the blocks even that distance posed difficulties. The most dangerous activity was blasting, which on one occasion produced a block of granite weighing 200 tonnes, with dimensions of 16.8 by 7.6 by 5.5 metres. In March 1927 the quarry claimed another life, 30-year-old Percival Poole.

**2. Mackaness, Caroline** (Ed), 2006, Bridging Sydney, ISBN: 1 876991 22 4

Pp. 180-182

When preparing plans and specifications for the bridge in 1921, Bradfield selected Moruya as the most suitable location for obtaining granite. Not only was the granite of an extremely high quality, but the site could be accessed directly from Sydney Harbour by sea and then along the Moruya River. The site was made available to Dorman, Long as part of their contract, which required 20,000 cubic yards of rock facing for the pylons and towers. The reserve of granite actually proved insufficient for the work and Dorman, Long ended up

purchasing an additional '1300 acres of granite land immediately adjacent to the Government deposit'.

Starting development work at the Moruya quarry at the end of 1924, Dorman, Long cleared scrub, built a wharf and railway tracks for the locomotive steam cranes, a power house with water supply, stone dressing sheds with three 5-ton overhead gantry cranes, a store and crushing and screening plants. A small township was built close to the quarry for the workmen and their families. 'The contractors built about 70 houses for the workmen, each with good amenities, consisting of four rooms, with wash and outhouses and provided with sanitation.'

At the height of production the Moruya quarry employed 250 workers. Because of a shortage of available stonemasons in Australia, many of the workers were brought out from Scotland and Italy. The Italians were mostly single men and lived in barracks accommodation with their own dedicated cook to prepare Italian meals eaten in a mess hall. The Scots, mainly from Aberdeen, brought their families with them and added to the cultural atmosphere with their highland dances in the local recreation hall. Reg Saunders, an apprentice stonemason at Moruya during the building of the bridge, recalled '... the richest experience of my life was to mix with these people, to see them dance furiously and I can emphasise the fact that I have never seen people so fired with enthusiasm on a dance floor as the Scottish people are'. In September 1926 a school opened at the site under an arrangement with the Department of Education and by 1927 there were 66 students enrolled. Once the work had been finished the houses were sold and some were dismantled and rebuilt in locations as far afield as Ulladulla.

There were 90 stonemasons at Moruya, who formed the principal workforce, and about 12 quarrymen to get the rude stone out, labourers, a powder monkey, carpenters, a plumber, electrician and engineers. - Detailed sketch plans were produced for the granite work. Each stone was cut to size and finished at the quarry, then numbered before being shipped to Sydney in readiness for fitting into place. 'Apart from the quality of the stone the Quarry has proved to be an excellent one for working. Blocks of granite, the largest so far about 2,200 tons weight are being quarried. These blocks are cut to suitable sizes from which the finished stones can be dressed. These blocks are split by plug and feather.' Resourcefully, the wastage from the quarry was crushed into aggregate and used in the concrete for the bridge piers and pylons. Crushing and grading was done with a 'Traylor crusher', two smaller 'Baxter crushers' and a screening plant. The material was stored in 700-ton capacity bins near the wharf from where it could be readily loaded onto the steamers by conveyor belts.

To carry the dressed stone and crushed aggregate from Moruya to Sydney, Dorman, Long placed an order for three single-screw steamers with the State Dockyard in Newcastle in July 1924. The ships were 426 tonnes gross, 45 metres long and 8 metres beam. *Dorlonco*, the first quarry fleet steamer to be completed, was delivered on 30 June 1925. The other two boats - the *Sir Arthur Dorman* and the *Sir Dudley de Chair* - were launched at the Walsh Bay Dockyard at Newcastle on 27 April 1925. The vessels were operated by Dorman, Long and on their return journey they brought food supplies and drinking water for the small township.

## **Cenotaph** memorial receives its own honour

For more than 80 years the Cenotaph in Martin Place, Sydney, has been the focus of the ANZAC Day Dawn Service as New South Wales stops to remember and honour the men and women who have died while in the service of our country.



*Moruya Quarry - Preparation of Altar Stone for Martin Place Cenotaph, 9 July 1927.*

Photographer unknown. Image courtesy State Records NSW from Series No.: 12685

Now its permanent protection as a memorial has been strengthened with its listing on the State Heritage Register on Remembrance Day 2009.

The creation of the Sydney Cenotaph is intrinsically linked to the holding of a commemorative service at the very hour the major battles of the Great War commenced.

Early on ANZAC Day 1927 five returned men saw an elderly woman laying a wreath at the still incomplete Cenotaph. The veterans resolved to hold the first Dawn Service at this sacred site the following year.

From the inaugural commemorative service held on 25 April 1928 the numbers have steadily grown till now

tens of thousands of people gather in darkness, and sometimes rain to pay their respects.

Unlike other war memorials which venerate the members of a town or community or a section of the Australian

Defence Force or a particular battle or event, the Cenotaph is a rare example of a universal memorial. It was erected specifically as a place of commemoration for the people of Sydney.

The Cenotaph (or empty tomb) embodied the contribution of the people of NSW to the war effort and their collective loss. Finally completed in 1929, it

would become the sacrosanct symbol of remembrance and mourning.

Unusually for the period, the erection of a Cenotaph was organised by the Government rather than by a voluntary organisation.

As grief reverberated around NSW, senior officers with the

Returned Services League recognised a need for a central focus for commemoration and mourning, especially with the delay in completing the ANZAC Memorial in Hyde Park.

Martin Place had been the site of many wartime appeals, recruiting rallies and commemorative events so with the support of a newspaper proprietor, the then Premier of NSW Jack Long was lobbied in 1925 to set aside £10,000 to erect a Cenotaph.

Although he had opposed conscription during the War and was an avowed supporter of anti-imperialist movements, wig recognised an opportunity to promote a new image for himself as a friend of returned servicemen due to the growing strength of veterans' groups.

The restrained symbolism embodied in the simple granite altar and the bronze figures of two servicemen guarding the monument is a tribute to the work of Bertram Mackennal. A highly regarded sculptor of his era, Mackennal also designed war memorials in Britain and elsewhere in Australia.

The Cenotaph's base is comprised of 23 pieces of Moruya granite; the same stone as used for the Sydney Harbour Bridge pylon facings. The important rectangular altar-stone 3.05m x 1.6m, and 1.22m high, with a weight of around 20 tonnes, was put in place on the 1 August 1927 under the supervision of Dr John Bradfield, Engineer for the Sydney Harbour Bridge.

It lies in an east to west line following the street alignment of Martin Place and is positioned directly over the Tank Stream which flows in an underground channel beneath it.

The stone structure was dedicated and presented to the City of Sydney, on the 8th August 1927 with Lieutenant General Sir Harry Chauvel (of the Light Horse Charge at Beersheba fame) among the many noted official guests.

On 21 February 1929, the anniversary of the entry of the Australian Light Horse into Jericho Palestine in 1918, a large crowd gathered for the official unveiling.

The images of two servicemen cast in bronze now stood on either side of the altar-stone. They were modelled on two actual returned servicemen. The figure on the eastern flank is of an infantryman from the ANZAC day landing at Gallipoli, Corporal William Pigott Darby who served with the 15th Infantry Battalion and 4th Field Ambulance AIF while the western figure is that of a RAN Leading Signaller John William Varcoe who earned a Distinguished Service Medal in November 1917 while serving on board the destroyer HMAS Parramatta in the Mediterranean.

Both are depicted realistically, wearing their uniforms, packs and carrying weapons. As representatives of their 300,000 Australian comrades who served overseas, the soldier does not wear a colour unit catch. Both are in the 'at ease' stance - and each faces a flagpole situated approximately three metres from the monument.

As the greatest living Australian of his generation - and representative of all the returned World War 1 servicemen, the retired Lieutenant General Sir John Monash provided the key address.

The sombre mood of the occasion was reflected in the understated bronze wreath that draped the top of the altar together with the inscriptions "To our glorious *dead*" and "Lest we forget" on the northern and southern faces respectively.

With the World War 1 generation long gone, and the ranks of World War II veterans now thinning with each passing year, it befalls the younger Australian service men and women

to lay a wreath in the pre dawn darkness in memory of their own fallen comrades overseas.

\*\*\*\*\*

This nomination prepared for the Sydney Division EHC by John Gibson, Michael Clarke and Scott Renwick.

6 September 2010

## **Appendix C Assessment of Significance: Checklist**

### **Acknowledgements**

This appendix is based principally on the work by the NSW Heritage Office in preparing its revised 2001 publication, *Assessing Heritage Significance*, which is part of the NSW

Heritage Manual. Readers are referred to that publication for a list of contributors and sources. Their contribution is gratefully acknowledged.

Other State publications and the Australian Heritage Council Guidelines have also been consulted in an attempt at Australia-wide uniformity.

### **Differentiation between National Engineering Heritage Landmarks (NEHLs) and Historic Engineering Markers (HEMs)**

Having completed the *Assessment of Significance* (Appendix B, Item 2), authors should complete the following tabulations to help them clarify the potential level of award. A work which is deemed by the author to be of heritage significance to a State or the Nation in at least one of the following criteria (Historic phase, Association, Creative/Technical Achievement, Research Potential, Social, Rarity and Representativeness) could be eligible for a NEHL. A work that is deemed heritage significant to other than the Nation or State in at least one of the criteria would be eligible for a EHM.

Determination of significance requires analysis and professional judgement. The guidelines for inclusion and exclusion are only pointers and should not constrict consideration of other factors.

### **Limitations**

Due to the differences existing between State heritage acts and their assessment guidelines, relevant State guidelines and procedures or those of the Australian Heritage Council, may need to be consulted if it is intended that a work be submitted for inclusion in a State or the National Heritage List. However, following these Guidelines will provide sufficient basic information for a plaquing nomination.

Historical Significance	Indicate 'Agree' or leave blank		
	National significance	State significance	Other than National or State
<b>Guidelines for inclusion</b>			
Shows evidence of a significant human activity.		Agree	
Is associated with a significant activity or historical phase.	Agree		
Maintains or shows the continuity of a historical process or activity.			
<b>Guidelines for exclusion</b>			
Has incidental or unsubstantiated connections with historically important activities or processes.			
Provides evidence of activities or processes that are of dubious importance.			
Has been so altered that it can no longer provide evidence of a particular association			

Association with important person or group	Indicate 'Agree' or leave blank		
	National significance	State significance	Other than National or State
<b>Guidelines for inclusion</b>			
Shows evidence of a significant human occupation.		Agree	
Is associated with a significant event, person, or group of persons.	Agree		
<b>Guidelines for exclusion</b>			
Has incidental or unsubstantiated connections with historically important people or events.			
Provides evidence of people or events that are of dubious historical importance			
Has been so altered that it can no longer provide evidence of particular association.			

Creative or Technical Achievement	Indicate 'Agree' or leave blank		
	National significance	State significance	Other than National or State
<b>Guidelines for inclusion</b>			
Shows or is associated with, creative or technical innovation or achievement.	Agree		
Is aesthetically distinctive.	Agree		

Has landmark qualities.	<b>Agree</b>		
Exemplifies a particular taste, style, or technology.		<b>Agree</b>	
<b>Guidelines for exclusion</b>			
Is not a major work by an important designer or artist.			
Has lost its design or technical integrity.			
Its visual or sensory appeal or landmark qualities have been more than temporarily downgraded.			
Has only a loose association with a creative or technical achievement.			
<b>Research Potential</b>	<b>Indicate 'Agree' or leave blank</b>		
	<b>National significance</b>	<b>State significance</b>	<b>Other than National or State</b>
<b>Guidelines for inclusion</b>			
Has the potential to yield new or further substantial scientific and/or archaeological information.			<b>Agree</b>
Is an important benchmark or reference site or type.		<b>Agree</b>	
Provides evidence of past human cultures that is unavailable.			
<b>Guidelines for exclusion</b>			
Has little archaeological or research potential.			
Only contains information that is readily available from other resources or archaeological sites.			
The knowledge gained would be irrelevant to research, human history, or culture.			
<b>Social / Cultural</b>	<b>Indicate 'Agree' or leave blank</b>		
	<b>National significance</b>	<b>State significance</b>	<b>Other than National or State</b>
<b>Guidelines for inclusion</b>			
Is important for its association with an identifiable group.	<b>Agree</b>		
Is important to a community's sense of place.			<b>Agree</b>
<b>Guidelines for exclusion</b>			
Is only important to the community for amenity.			
Is retained only in preference to a proposed alternative.			

Rarity	Indicate 'Agree' or leave blank		
	National significance	State significance	Other than National or State
<b>Guidelines for inclusion</b>			
Provides evidence of a defunct custom, way of life or process.			Agree
Demonstrates a process, custom, or other human activity that is in danger of being lost.			
Shows unusually accurate evidence of a significant human activity.			
Is the only example of its type			
Demonstrates designs or techniques of exceptional interest.			
Shows rare evidence of a significant human activity important.			
<b>Guidelines for exclusion</b>			
Is not rare.			
Is numerous but under threat.			
Representativeness	Indicate 'Agree' or leave blank		
	National significance	State significance	Other than National or State
<b>Guidelines for inclusion</b>			
Is a fine example of its type.		Agree	
Has the principal characteristics of an important class or group of items.			Agree
Has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity.			
Is a significant variation to a class of item.		Agree	
Is part of a group which collectively illustrates a representative type.		Agree	
Is outstanding because of its setting, condition or size.			Agree
Is outstanding because of its integrity or the esteem in which it is held.			
<b>Guidelines for exclusion</b>			
Is a poor example of its type.			
Does not include or has lost the range of characteristics of a type.			
Does not represent well the characteristics that make up a significant variation of a type.			